

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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*Ex parte* CARLOS O. PINZON and PAUL THAU

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Appeal 2007-1609  
Application 09/733,900  
Technology Center 1600

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Decided: November 16, 2007

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Before TONI R. SCHEINER, NANCY J. LINCK, and  
RICHARD M. LEOVITZ, *Administrative Patent Judges*.

LEOVITZ, *Administrative Patent Judge*.

**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 321, 322, 325, 330, 334-335, 337, 338, and 348-354. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

**STATEMENT OF THE CASE**

The claims are directed to a cosmetic composition comprising a polyamide polymer of formula (I) and an oil-soluble cationic surfactant.

Claims 321, 322, 325, 330, 334, 335, 337, 338, and 348-368 are pending (Appeal Br. 3<sup>1</sup>).

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<sup>1</sup> “Appeal Br.” refers to the Supplemental Appeal Brief filed Jan. 17, 2007.

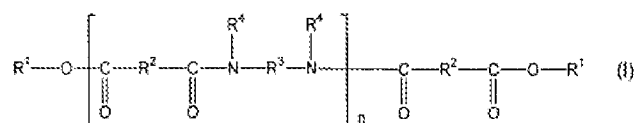
Claims 355-368 are objected to, but the Examiner states that these claims would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims (Answer 2).

Claims 321, 322, 325, 330, 334, 335, 337, 338, and 348-354 stand rejected under 35 U.S.C. § 103(a) as obvious over Pavlin (U.S. Pat. No. 5,783,657, Jul. 21, 1998) in view of Murphy (U.S. Pat. 6,423,324 B1, Jul. 23, 2002) and Seidel (U.S. Pat. 5,830,483, Nov. 3, 1998) (Answer 3).

We select claim 321 as representative to decide this appeal. *See* 37 C.F.R. § 41.37(c)(1)(vii). Claim 321 reads as follows:

A mascara, an eyeliner, a foundation, a lipstick, a blusher, a make-up-removing product, a make-up product for the body, an eyeshadow, a face powder, a concealer product, a nail composition, a shampoo, a conditioner, an anti-sun product or a care product for the skin, lips, or hair comprising a composition comprising at least one liquid fatty phase in said mascara, eyeliner, foundation, blusher, lipstick, make-up-removing product, make-up product for the body, eyeshadow, face powder, concealer product, nail composition, shampoo, conditioner, antisun product or care product for the skin, lips, or hair which comprises:

(i) at least one structuring polymer chosen from polyamide polymers of formula (I):



in which:

- n is an integer which represents the number of amide units such that the number of ester groups present in said at least one structuring polymer ranges from 10% to 50% of the total number of all said ester groups and all said amide groups comprised in said at least one structuring polymer;
- R<sup>1</sup>, which are identical or different, are each chosen from alkyl groups having at least 4 carbon atoms and alkenyl groups having at least 4 carbon atoms;
- R<sup>2</sup>, which are identical or different, are each chosen from C<sub>4</sub> to C<sub>42</sub> hydrocarbon-based groups with the proviso that at least 50% of R<sup>2</sup> are chosen from C<sub>30</sub> to C<sub>42</sub> hydrocarbon-based groups;

- R<sup>3</sup>, which are identical or different, are each chosen from C<sub>2</sub> to C<sub>36</sub> hydrocarbon-based groups; and
  - R<sup>4</sup>, which are identical or different, are each chosen from hydrogen and C<sub>1</sub> to C<sub>10</sub> alkyl groups, with the proviso that at least 50% of all R<sup>4</sup> are chosen from hydrogen; and
- (ii) at least one oil-soluble cationic surfactant.

### ISSUE ON APPEAL

The issue in this appeal is whether persons of ordinary skill in the art would have had reason to combine a polyamide resin of formula (I) with an oil-soluble cationic surfactant to have made the cosmetic of claim 321.

### FINDINGS OF FACT (“FF”)

#### The Pavlin Patent

1. Pavlin describes ester-terminated polyamide (ETPA) resins (Pavlin, at col. 2, l. 24 to col. 4, l. 64).
2. ETPA is described by Pavlin as useful for forming gels with liquid hydrocarbons, preferably solvents and oils (Pavlin, at col. 3, ll. 56-62; at col. 13, ll. 47-49; at col. 15, ll. 12-44; Office Action<sup>2</sup> 4).
3. The gels do not exhibit syneresis (Pavlin, at col. 17, ll. 3-6; Office Action 4).
4. The gels are useful in formulating personal care products (Pavlin, Abstract), such as deodorant, make-up, lipstick, foundation make-up, and make-up removers (Pavlin, at col. 3, ll. 31-40; Office Action 4).
5. The EPTA resins described by Pavlin (FF 1) meet the structural limitations of the polyamide polymers of formula (I) recited in claim 321 (Office Action 4).

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<sup>2</sup> “Office Action” refers to the Office Action, Paper No. 15, dated Jul. 16, 2003.

6. Pavlin describes its EPTA resin as a component of personal care and cosmetic products, such as make-up and lipstick (FF 4), which satisfy the limitations recited in claim 321 of a “lipstick” and “make-up product” (Office Action 4).

7. Pavlin states that its gels may be formulated with emulsifiers (Pavlin, at col. 17, ll. 26-28; Office Action 4), but does not teach that the emulsifier can be an “oil-soluble cationic surfactant” as recited in claim 321 (Office Action 4).

*Level of skill in the art*

8. “The gels of the invention may be formulated into personal care products according to techniques well known in the art. The gel may be combined with ingredients conventionally incorporated into personal care products such as chelating agents, colorants, emulsifiers, fillers, hardeners, perfumes, strengtheners, water and wax, to name a few” (Pavlin, at col. 17, ll. 24-29; *see also* Office Action 4).

9. “Such additives are also set forth in, e.g., the following documents, all incorporated by reference herein in their entirety: U.S. Pat. Nos. 3,255,082 to Barton, 4,049,792 to Elsnau, 4,137,306 to Rubino et al.” (Pavlin, at col. 17, ll. 29-33).

10. Thus, persons of skill in this art knew to choose from conventional ingredients and additives to achieve cosmetic products with the desired characteristics (FF 8, 9).

11. Person of skill in the art would have known that surfactants are also referred to as emulsifiers (Answer 4).

The Murphy Patent

12. Murphy describes a cosmetic composition comprising a polyamide resin, a solvent for the resin, and a gelling agent (Murphy, at col. 2, ll. 9-14; Office Action 4).

13. Murphy teaches that the composition preferably comprises a surfactant (Murphy, at col. 8, l. 66 to col. 9, l. 2; Office Action 4). “The surfactant acts as a viscosity modifier or thickener, reduces the susceptibility of the composition to syneresis, and improves the texture of the composition” (Murphy, at col. 9, ll. 2-5; *see* Office Action 4).

14. Oil-soluble nonionic surfactants (having an HLB of about 7 to 10) are described by Murphy as preferred (Murphy, at col. 9, ll. 28-30), but Murphy states that anionic or cationic surfactants can also be used as surfactants (Murphy, at col. 10, ll. 46-52).

15. Murphy’s preference for oil-soluble nonionic surfactants (FF 13) would have been understood as a general preference for oil-soluble surfactants.

16. Murphy lists various suitable nonionic surfactants (Murphy, at col. 9, l. 65 to col. 10, l. 37) and also states that exemplary nonionic (Murphy, at col. 9, ll. 49-52), anionic (Murphy, at col. 10, ll. 46-50), and cationic surfactants (Murphy, at col. 10, ll. 50-52) can be selected from McCutcheon’s *Emulsifiers and Detergents* (1993).

17. The choice of a particular surfactant to combine with the polyamide resin would have been within the level of ordinary skill in the art and the type of choice the skilled worker ordinarily makes (FF 15).

18. In view of Murphy’s preference for oil-soluble surfactant, the selection of an oil-soluble cationic surfactant would have been a logical choice by one skilled in the art.

19. Seidel teaches that cationic surfactants are conventional additives in cosmetic formulations (Seidel, Abstract; at col. 1, l. 25; at col. 4, ll. 45-46), such as lauryl methyl gluceth-10 hydroxypropyl ammonium chloride (Seidel, at col. 4, ll. 13-14).

Reason to combine prior art

20. Persons of ordinary skill in the art would have been motivated to have added oil-soluble surfactants to a cosmetic comprising a polyamide resins to modify its viscosity and improve its texture (FF 12-14).

ANALYSIS

In making an obviousness determination, the Examiner must first identify how the claimed invention differs from the prior art. After such differences have been ascertained, a reason must be provided as to why persons of ordinary skill in the art would have made the claimed subject matter. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). When making this determination, the scope of the prior art and level of ordinary skill must be considered. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

Claim 321 is directed to a cosmetic composition comprising (i) a polyamide polymer of formula (I) and (ii) an oil-soluble cationic surfactant. The Examiner finds that Pavlin describes cosmetics compositions (FF 6) comprising the same type of polyamide resin recited in claim 321 (FF 1, 5), and states that emulsifiers may be included in it, but does not teach that the emulsifier can be an “oil-soluble cationic surfactant” as recited in claim 321 (FF 7, 11). However, the Examiner finds that Murphy teaches that surfactants, including oil-soluble cationic surfactants of claim 321, are preferably formulated with polyamide resin cosmetic compositions to

modify viscosity and improve texture (FF 12-14). The Examiner finds, and we agree, that this teaching would have prompted persons of skill in the art to have added an oil-soluble cationic surfactant to Pavlin's cosmetic composition which contains a polyamide resin of formula I to have made the invention of claim 321 (Office Action 5; Answer 6-7; FF 20).

Once the Examiner has met his burden, the burden shifts to the applicant to come forward with evidence or argument to rebut the prima facie case. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). *See also Hyatt v. Dudas*, 492 F.3d 1365, 1369-70 (Fed. Cir. 2007). Thus, we turn to Appellants' arguments.

Appellants contend that the Examiner has not established the requisite motivation, suggestion, or teaching of the desirability of making the claimed combination (Appeal Br. 11). Appellants argue that one of skill in the art would not have been motivated "to add an oil-soluble cationic surfactant to Pavlin with the expectation of reducing syneresis because Pavlin's compositions are already free of this drawback" (Appeal Br. 14).

We do not find this argument persuasive. Murphy teaches that surfactants are preferably added to polyamide resin compositions for three purposes: 1) as a viscosity modifier; 2) to reduce susceptibility to syneresis; and 3) to improve the composition's texture. Thus, while it is true that Pavlin states that its polyamide resin gels do not exhibit syneresis (FF 3; Appeal Br. 14), Murphy gives two additional reasons for including a surfactant in a composition comprising a polyamide resin (the same type of resin employed by Pavlin): to modify viscosity and to improve texture (FF 13) – providing a reason to formulate Pavlin's composition with it (FF 20).

Pavlin's composition is based on a polyamide resin, which is the same type of polymer described in Murphy's composition to benefit from a surfactant. This teaching coupled with Pavlin's disclosure that surfactants ("emulsifiers") may be included in its composition (FF 7, 8, and 11) provides strong reason to have combined a known surfactant for its expected function in improving the characteristics of a composition comprising a polyamide resin. The "combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR*, 127 S.Ct. at 1739. Because Appellants have not shown that the claimed composition exhibits anything more than its expected properties, we conclude that rejection was properly maintained by the Examiner.

Appellants contend that Murphy does not provide the motivation to have selected an oil-soluble cationic surfactant (*see* Reply Br. 2). They argue that "Murphy does not specifically mention *oil-soluble* cationic surfactants anywhere, but instead merely incorporates by reference a laundry list of more than 340 cationic surfactants, none of which are identified as to whether they are oil-soluble or water-soluble" (Appeal Br. 14). They urge that, given Murphy's stated preference for non-ionic surfactants, it is "unreasonable to conclude that one of ordinary skill in the art would have been motivated to pick and choose specifically an *oil-soluble* cationic surfactant, incorporated by reference and buried amongst a disclosure of hundreds of other cationic surfactants" (Appeal Br. 15).

Murphy specifically teaches that oil-soluble nonionic surfactants are preferably incorporated into its cosmetic compositions (FF 13-14). Murphy states that cationic surfactants can also be used (FF 14). We find that



Murphy's preference for oil-soluble nonionic surfactants would have been understood as a general preference for oil-soluble surfactants (FF 15) – and thus, would have guided persons of skill in the art to select an oil-soluble surfactant when picking a cationic surfactant. Obviousness under 35 U.S.C. § 103 asks “not merely what the references expressly teach but what they would have suggested to one of ordinary skill in the art at the time the invention was made.’ *In re Lamberti*, 545 F.2d 747, 750, 192 USPQ at 280.” *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807-8 (Fed. Cir. 1989). Thus, Murphy's failure to specifically identify an oil-soluble cationic surfactant is not a flaw in the Examiner's analysis since Murphy would have *reasonably suggested* one to persons of ordinary skill in the art.

Furthermore, the evidence of record clearly establishes that techniques of making personal care products were “well known in the art” at the time the invention was made (FF 8). Persons of skill in this art knew to choose from conventional ingredients and additives to achieve products with the desired characteristics (FF 9, 10). Thus, the choice of a surfactant (FF 8) – a conventional cosmetic additive – to have added to Pavlin's composition would have been within the level of ordinary skill in the art at the time of the invention.

We also are not persuaded that the choice of an oil-soluble cationic surfactant is impermissible hindsight (Appeal Br. 15). In teaching that surfactants are preferably incorporated into a composition comprising a polyamide polymer, Murphy describes only three choices: nonionic, anionic, and cationic (FF 14). While nonionic are preferred, Murphy teaches that anionic and cationic are suitable. Thus, persons of skill would not find it necessary to choose from hundreds – in fact, there are only three types

which are mentioned in the Murphy patent. Murphy also reasonably suggests choosing an oil-soluble surfactant (*see supra*). Therefore, we find that the selection of an oil-soluble cationic surfactant would have been a logical choice by one skilled in the art (FF 18) and does not constitute hindsight in deprecation of the claimed invention.

Appellants also urge that

Murphy actually *teaches away from* this alleged motivation. At column 7, lines 1-20, Murphy discusses how the combination of the polyamide with the solvent actually shows *increased syneresis* in the absence of the specific, required gelling agent.

(Appeal Br. 16).

Murphy states that a composition with low amounts of gelling agent undergoes irreversible syneresis as the temperature increases (col. 7, ll. 1-20). We are not persuaded that this “teaches away” from the claimed combination as asserted by Appellants. Instant claim 1 is open-ended and is not limited to the recited combination of a polyamide polymer of formula (I) and an oil-soluble cationic surfactant; thus, the claim does not exclude the presence of a gelling agent as described in Murphy’s composition. In addition to this, the combination relied upon by the Examiner is based on the addition of the surfactant to Pavlin’s cosmetic comprising a polyamide ester and Murphy’s surfactant to modify the cosmetic’s viscosity and texture (FF 13), and therefore does not require the gelling agent.

Appellants urge that Seidel does not provide motivation that “would have suggested specifically selecting lauryl methyl gluceth-10 hydroxypropyl ammonium chloride from the list of ionic emulsifiers disclosed therein for combination with the gel formulations of Pavlin” (Appeal Br. 16).

We do not agree. The prior art provides a reason to have selected an oil-soluble cationic surfactant (FF 18). Seidel teaches that cationic surfactants are conventional additives in cosmetic formulations (FF 19). The selection of a particular surfactant was within the level of ordinary skill in the art and the type of choice that a skilled person ordinarily makes (FF 16-17). Consequently, we conclude that the choice of a suitable oil-soluble cationic surfactant would have been obvious to persons of ordinary skill in the art.

For the foregoing reasons, we affirm the rejection of claim 321. Claims 322, 325, 330, 334-335, 337, 338, and 348-354 fall with claim 321 because separate reasons for their patentability were not provided. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2006).

#### TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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